Claims

[1]   An XML processor comprising:

a first memory storing software for performing an XML processing, variables, and values required to execute software;

a hardware processing module performing a part of the XML processing in a hardware manner;

a second memory employed by the hardware processing module; and

a CPU controlling the XML processing by the software stored in the first memory.

[2]   The XML processor according to claim 1, wherein the hardware processing module performs a memory management function used in XML parsing, i.e., assignment, return, and reassignment of memory among XML processing functions.

[3]   The XML processor according to claim 2, wherein the hardware processing module processes assignment, reassignment, and return of memory with respect to XML elements which are expressed as nodes and a tree relation between the nodes, the module comprising:

a node usage check table divided into several blocks, each block indicating whether to use a corresponding node table;

a node table managing the whole information that each node has to store, i.e., a node name, a node type, a parent node, a child node, and the like; and

a node memory storing actual content of every component of the node table.

[4]   The XML processor according to claim 3, wherein the node table has addresses in which every component on the node memory is respectively stored.

[5]   The XML processor according to claim 1, wherein the hardware processing module performs an XML DTD processing.

[6]   The XML processor according to claim 1, wherein the hardware processing module performs a state machine of an XML schema.

[7]   An XML processing method performed in a system having an independent hardware-based first XML processor and a software-based second XML processor, the method comprising:

checking a size of an XML file to be processed;

performing an XML processing by the second XML processor if a size of the XML file to be processed is larger than an established size; and

performing an XML processing by the first XML processor if a size of the XML file to be processed is not larger than the established size.

[8]   The method according to claim 7, further comprising:

checking whether establishment of a tree is necessary after the XML processing;

performing the XML processing by the second XML processor if the establishment of the tree is not necessary ; and

performing the XML processing by the first XML processor if the establishment of the tree is necessary .

[9]   The method according to claim 7, further comprising:

checking whether a fast processing is necessary;

performing the XML processing by the second XML processor if the fast processing is not necessary ; and

performing the XML processing by the first XML processor if the fast processing is necessary.